

DARDURUS, A NEW GENUS OF AMAUROBIID SPIDER FROM EASTERN AUSTRALIA, WITH DESCRIPTIONS OF SIX NEW SPECIES

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ABSTRACT

A new genus *Dardurus* (fam. Amaurobiidae) is described, with six new species *D. spinipes*, *D. silvaticus*, *D. tamborinensis* (cribellate), *D. nemoralis*, *D. saltuosus* and *D. agrestis*. The cribellum looks like a flat semi-circular colulus and a magnification of 200x was needed to see the spinning areas. The species show a reduction in the number of spinning tubes with a corresponding reduction in the length and number of hairs in the calamistrum until in *D. tamborinensis* neither spinning tubes nor calamistrum are present. The spiders live a sedentary life in small, decorated silk tubes with two openings. Scanning electron micrographs of the cribella of *Ixeuticus longinquus* (Koch, L., 1867) and *Stiphidion facetum* Simon, 1902 are included for comparison.

In the latter half of the nineteenth century collections of spiders were made around the sea ports of Queensland and New South Wales for the Godeffroy Museum, Hamburg. About 600 spiders were described in *Die Arachniden Australiens* and its *Supplement* by Koch (1871–81) and Keyserling (1881–89). At about the same time Thorell described 46 species from Cape York Peninsula in *Studi sui Ragni Malesi e Papuani*, vol. 3. Between 1893 and 1920 Rainbow contributed much to the knowledge of Australian spiders. He was entomologist at the Australian Museum, Sydney for many years and not only described about 200 spiders but also wrote much on their webs and behaviour. In 1911 he published a *Census of Australian Araneidae* where he listed approximately 1200 species. Included among these were 100 spiders described by Hogg from specimens in the British Museum. From 1926 Hickman, Australia's foremost araneologist, described about 70 spiders most of which were from Tasmania and some of which required the erection of new families. Recently Main has revised and re-defined some of the mygalomorph genera. It will be seen from this brief review that the araneomorphs of E. Australia have been rather neglected since 1920, so it is not surprising that a new genus, like *Dardurus*, can be found in a suburban garden.

The term 'amaurobiid' is used in the broad sense of Lehtinen (1967) not in the restricted sense of Forster and Wilton (1973). All specimens have

been deposited in the Queensland Museum (QM). Measurements of the cephalothorax length (CL), cephalothorax width (CW), abdomen length (AL), abdomen width (AW), and measurements of leg segments were made with an ocular micrometer and converted to millimetres.

Dardurus nov. gen.

Small size. Both rows of eyes straight if viewed from above, procurved if viewed from front; anterior median eyes smallest. Cheliceral boss present. Labium wider than long. Maxillae narrow at base, wide and truncated at apex with well marked serrula and scopula. Sternum widely truncate, produced posteriorly between fourth coxae. Trochanteral notch absent. Anterior tibiae with more than 3 pairs of conspicuous long ventrolateral spines. Superior tarsal claws with 7 pectinations; inferior claw smooth. Palpal tarsus longer and wider than other tarsi. Plumose hairs absent. Trichobothria in a single row of increasing length distally on metatarsi and tarsi, irregularly placed on tibiae. Trichobothria on cymbium. Six spinnerets, anterior laterals largest. Undivided cribellum or flat semicircular colulus. Cribellum absent in ♂. Calamistrum proximal or absent. Epigynum with undivided fossa. Apophyses on patella and tibia of ♂ palp. Embolus curved, spiniform; conductor membranous. Four unbranched tracheal tubes arising from a median posterior

spiracle. The spider lives on the underside of logs or in soil in a camouflaged silken tube with two openings.

The generic name is derived from the Aboriginal work 'dardur' = a bark hut.

TYPE SPECIES: *Dardurus spinipes* n. sp.

***Dardurus spinipes* n. sp.**

(Figs. 1–10, 19a; Plates 59A, 60B)

MATERIAL EXAMINED

HOLOTYPE: Open sclerophyll forest on Brisbane River, Roedean St, Fig Tree Pocket, Brisbane, SE.Q., V. Davies, 22.v.74, ♀, QM W4877.

PARATYPES: Open sclerophyll forest on Brisbane R., Roedean St, Fig Tree Pocket, Brisbane, SE.Q., V. Davies, 15.vi.74, 1♂, QM W4878; 4.iii.74, 1♀, 1 juv., QM W4879; 21.i.73, 1♀, QM W4880; 12.viii.73, 1♀, 1♂, QM W4881; 9.ix.73, 3♀, QM W4882; 2.viii.73, 2♀, 1♂, 1 penult. ♂, 1 juv., QM W4883; 22.v.74, 3♀, 4♂, 1 juv., QM W4884; 15.vi.74, 2♀, 1♂, QM W4885; 15.vi.74, 1♀, QM W4886; 1.viii.74, 3♀, QM W4887. Under log in bank near Little Yabba Creek, Conondale Ra., SE.Q., R. Raven, 31.viii.74, 6♀, 1♂, QM W4888; 31.viii.74, 4♀, 2 juv., QM W4889.

DESCRIPTION OF FEMALE

CL 1.50; CW 0.98; AL 1.78; AW 1.10.

Cephalothorax and legs are orange brown, abdomen is grey-black with lighter grey pattern (Figs. 1, 2). Small white patches ('thoracic patches') one on each side of the thoracic fovea similar to those noticed by Forster and Wilton (p. 166, 1973) in some of the female cribellate Amphinectidae from New Zealand. The long spines on tibiae and metatarsi I and II are reddish brown in colour.

Both rows of eyes are procurved if viewed from the front, straight if viewed from above (Figs. 3a, b). The ratio of eyes AME:ALE:PME:PLE is 6:10:9:9. There are 4 teeth on retromargin of chelicerae; 2 large and 3 small teeth on promargin (Fig. 4). The maxillae are narrow at the base, wide and truncated at the apex with a well marked serrula and scopula. The labium is wider than long in ratio 1:0.63. The sternum is longer than wide, 1:0.87.

Notation of spines: Palp: tibia, p. 1–2.2; tarsus, numerous spines (Fig. 5). First leg (Fig. 6): femur, d.1.p.1. distal; tibia, v.2.p.0.1.1.1.1.(1).r.0.1.1.1.1; metatarsus, v.1.p.0.1.1.1.r.0.1.1.1; tarsus, 0. Second leg: femur, d.1.1.0; tibia, v.2.p.0.1.1.1.1.r.0.1.0.1.1.1; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1. Third leg: tibia, d.0.1.0.v.1.0.1.p.1.1.0.r.1.1.0; metatarsus, numerous small spines. Fourth leg: tibia, v.1.0.1.0.2.p.0.1.0.1.0.r.0.1.0.1.0; metatarsus, several spines. Calamistrum proximal, consisting of 7 rather sparse curved hairs (Fig. 7). Superior tarsal claws with 7 pectinations (Fig. 8); the inferior claw smooth.

Six spinnerets: anterior laterals (AS) largest, in ventral view tending to obscure the rest. AS:cribellum, 1:1–10. The cribellum has the appearance of a large flat colulus. The electron scanning microscope shows spinning tubes are present in 6 transverse alternating rows with about 15–16 tubes in each row (Plate 60, B). The epigynum (Figs. 9a, b, 19a) occupies a large part of the ventral abdominal surface and has well marked lateral ridges. The fossa is undivided, i.e. there is no median ridge or guide. Width of external epigynum $2\frac{1}{2} \times$ length.

VARIATION: Cephalothorax lengths were from 1.14–1.50. Sometimes there are 2 large and only 2 small teeth on the promargin of the chelicerae. There was some variation in the arrangement of spines on the corresponding legs from left and right sides of the spiders. This is indicated by the use of () in the notation of spines. An extra prolateral spine is not uncommon on the first and second tibia. The spiders from Conondale Range were darker in colour and there was a dorsal spine on the fourth femur.

DESCRIPTION OF MALE

QM W4878: CL 1.20; CW 0.80; AL 1.32; AW 0.88.

Cephalothorax lengths varied from 1.02 to 1.46 mm. Males are similar to females in colour, general structure and spination of the legs except that the

TABLE 1: LEG MEASUREMENTS OF *D. spinipes* ♀ AND (♂)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	1.06(0.98)	0.46(0.40)	1.00(0.96)	0.82(0.80)	0.28(0.34)	3.62(3.48)
ii	0.84(0.74)	0.42(0.36)	0.66(0.60)	0.66(0.64)	0.26(0.26)	2.84(2.60)
iii	0.68(0.62)	0.36(0.30)	0.38(0.40)	0.56(0.52)	0.24(0.24)	2.22(2.08)
iv	0.94(0.90)	0.42(0.34)	0.72(0.74)	0.84(0.80)	0.30(0.30)	3.22(3.08)
palp	0.40(0.42)	0.20(0.14)	0.28(0.20)	—	0.42(0.66)	1.30(1.42)



Figs. 1-8: - *D. spinipes*. 1, lateral view; 2, ventral view; 3a, eyes from top; 3b, eyes from front; 4, chelicera; 5, tarsus of palp; 6, first leg; 7, fourth leg; 8, superior tarsal claw.

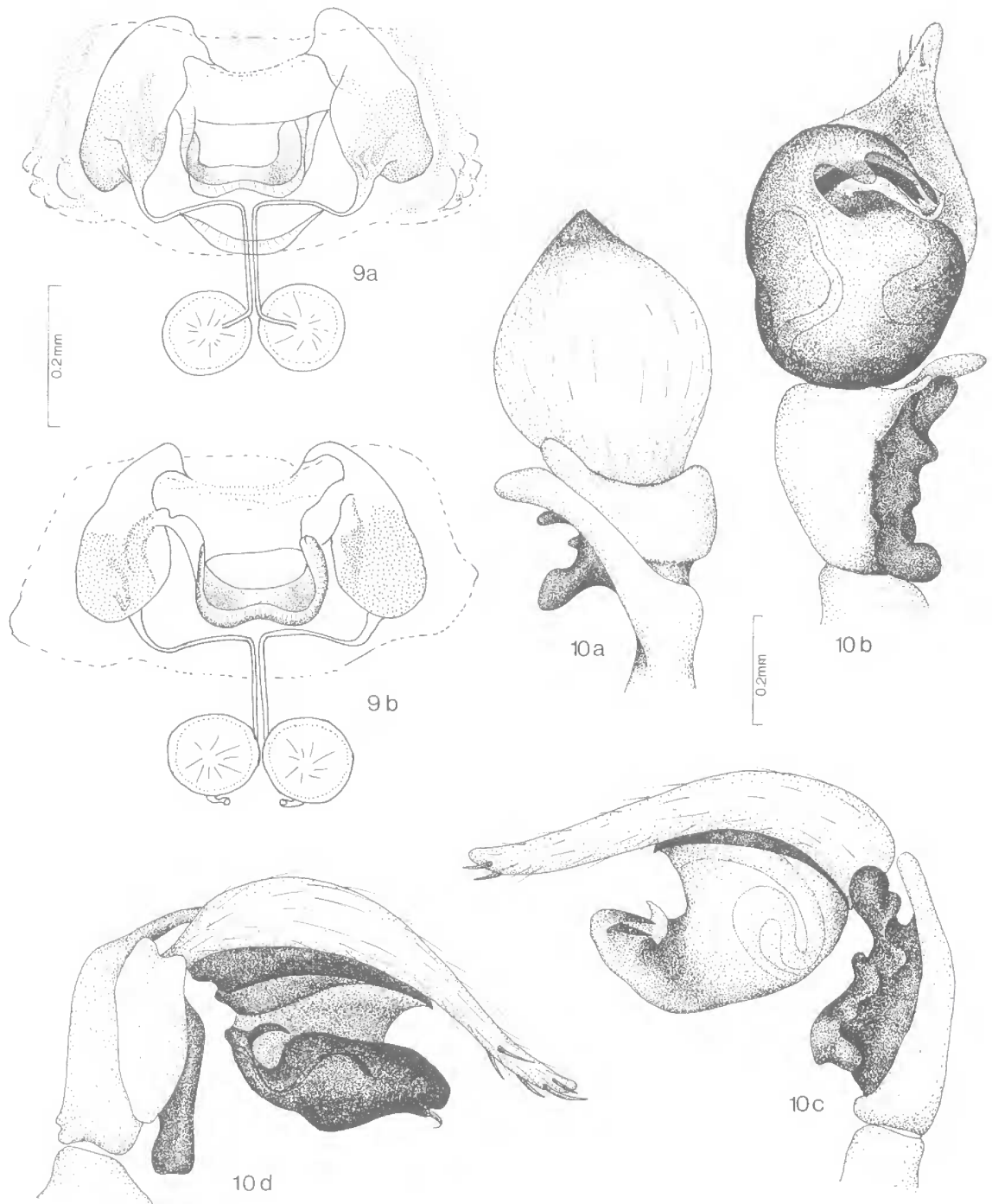


FIG. 9: ♀ *D. spinipes*. 9a, external epigynum, cleared; 9b, internal epigynum.

FIG. 10: ♂ *D. spinipes*. 10a, palp, dorsal; 10b, palp, ventral; 10c, palp, retrolateral; 10d, palp, prolateral.

prolateral distal spine on femur I is absent and there are no 'thoracic patches' near the fovea. There is a colulus in the penultimate and mature ♂. It is smaller than the ♀ cribellum and has no spinning tubes. Neither the penultimate nor the mature male has a calamistrum. Trichobothria are present on the cymbium. The palp has a finger-shaped anterior retrolateral apophysis on the patella and a very complex one with several protuberances on the retrolateral surface of the tibia (Fig. 10a, b, c). An apophysis arises from the tegulum and curves over the embolus which is retrolateral to the apophysis. A small ventral flange on the latter appears to keep the embolus in place. The spiniform embolus rests on a membranous conductor. Whether the apophysis is a median apophysis or whether this is absent is uncertain.

HABITS AND LIFE HISTORY

All the spiders were collected from open sclerophyll forest. They live in small (10–13 mm) tubes with 2 openings (Plate 59A) and are found on rotting wood or sometimes under stones or in soil. The tube which is decorated with bark debris (hence the generic name) or soil particles has no web outside it. Females were found throughout the year; penultimate males from February until May and males till the end of August. Males were often found with one palp broken off and it was not unusual to find them occupying the same tube as females. Egg sacs containing 3–6 eggs were found from August to March.

Dardurus silvaticus n. sp.

(Figs. 11–13, 19c; Plates 59B, 60A)

MATERIAL EXAMINED

HOLOTYPE: Rain forest, Mt Glorious, 32 km NW, Brisbane, SE.Q., V. Davies, 19.vii.74, ♀, QM W4890.

PARATYPES: Rain forest, Mt Glorious, SE.Q., V. Davies, 19.vii.74, 1♂, QM W4891; 20.vi.74, 2♀, 1♂, QM W4892.

DESCRIPTION OF FEMALE

CL 1.18; CW 0.88; AL 1.28; AW 1.10.

The spider is similar in colour and pattern to *D.*

spinipes however the abdominal pattern shows an extension of the pale patches over the posterior half of the abdomen giving it a lighter colour (Fig. 11). Small 'thoracic patches' are present. The eyes are similar to *D. spinipes*. There are 4 teeth on the retromargin of the chelicerae. The labium is wider than long 1:0.66. Sternum longer than wide 1:0.91.

Notation of Spines: Palp: tibia, p.1.2; tarsus, numerous small spines, First leg femur, d.1.1.0. p.1. distal; tibia, v.2.p.0.1.1.1.1.r.0.1.1.1.1.(1); metatarsus, v.1.p.0.1.1.1.r.0.1.1.1; tarsus, 0. Second leg: femur, d.1.1.0; tibia, v.2.p.0.1.1.1.1.r.0.1.0.1.1; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1. Third leg: tibia, d.0.1.0.v.1.0.1.p.1.1.0.r.1.1.0; metatarsus, numerous small spines. Fourth leg: tibia, v.1.1.1.0.1.p.0.(1).0.1.0.r.0.1.0.1.0; metatarsus, several spines. Calamistrum, proximal and well developed consisting of 9 curved hairs. Ratio of AS:cribellum 1:1.18.

The cribellum has about nine rows of spinning tubes with at least 25 tubes in a row (Plates 59B, 60A) which is many more than *D. spinipes*. In both species the tubes are unsegmented. The epigynum (Figs. 12a, b, 19c) is less chitinized than *D. spinipes* with weak lateral ridges and a large open fossa almost the width of the epigynum.

VARIATION: Cephalothorax of ♀ QM W4892 is 1.28 mm long. As in *D. spinipes* there may be extra spines on the first and second tibiae.

DESCRIPTION OF MALE

QM W4891: CL 1.10; CW 0.78; AL 1.12; AW 0.74.

The colour and pattern is similar to ♀. There are no 'thoracic patches' on the cephalothorax.

Notation of Spines: First leg: femur, d.1.0.p.1. distal; tibia, v.2.p.0.1.1.1.1.r.0.1.1.1.1.; metatarsus, v.1.p.0.1.1.1.r.0.1.1.1.; Second leg: femur, d.1; tibia, v.2.p.0.1.1.1.1.r.0.1.0.1.1.; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1. Third leg as in female. Fourth leg: tibia, v.1.0.1.0.1.p.0.1.0.0.0.r.0.(1).0.1.0. There is no calamistrum.

Male palp: The tibial apophysis on the palp (Fig. 13a, b) is less complex than *D. spinipes* with fewer

TABLE 2: LEG MEASUREMENTS OF *D. silvaticus* ♀ AND (♂)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	0.84(0.88)	0.40(0.40)	0.72(0.86)	0.64(0.76)	0.26(0.32)	2.86(3.22)
ii	0.66(0.70)	0.34(0.34)	0.52(0.54)	0.52(0.60)	0.22(0.28)	2.26(2.46)
iii	0.52(0.58)	0.28(0.28)	0.30(0.32)	0.40(0.48)	0.20(0.22)	1.70(1.88)
iv	0.80(0.84)	0.32(0.30)	0.60(0.64)	0.68(0.78)	0.28(0.30)	2.68(2.86)
palp	0.38(0.38)	0.20(0.18)	0.22(0.20)	—	0.32(0.54)	1.12(1.30)

protuberances. The embolus lies on a membranous conductor retrolateral to the apophysis.

***Dardurus tamborinensis* n. sp.**
(Figs. 14-15, 19b)

MATERIAL EXAMINED

HOLOTYPE: Rain forest, Curtis Falls track, Mt Tamborine 50 km S. Brisbane, SE.Q. V. Davies, 22.vi.75, ♀, QM W4893.

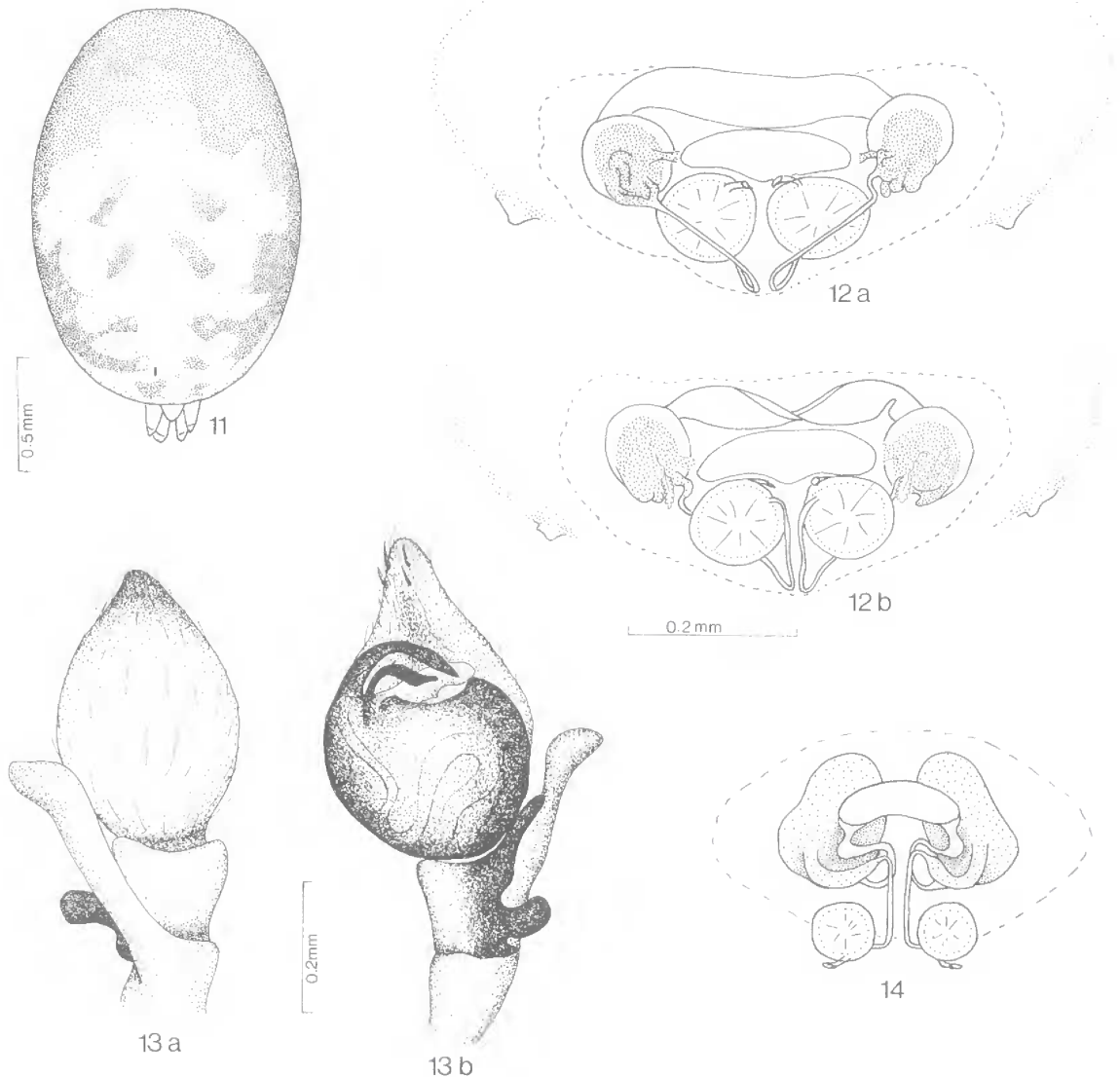
PARATYPES: Curtis Falls track, Mt Tamborine, SE.Q., V. Davies, 22.vi.75, 1♂, QM W4894; Curtis Falls track,

Mt Tamborine, SE.Q. V. Davies, C. L. Wilton, R. Raven, 10.vii.74, 2♂, 1♀, QM W4895.

DESCRIPTION OF FEMALE

CL 1.22; CW 0.84; AL 1.34; AW 0.90.

Cephalothorax and legs are pale yellow brown. Two small white 'thoracic patches' on each side of fovea present. Abdomen grey-black with lighter pattern. Eyes like *D. spinipes*. Five teeth on retromargin of chelicerae; 2 large and 2 small teeth of promargin. Labium wider than long 1:0.62. The sternum a little longer than broad 1:0.95.



FIGS. 11-12: *D. silyaticus*. 11, abdomen, dorsal; 12a, external epigynum, cleared; 12b, internal epigynum.

FIG. 13: ♂ *D. silyaticus*. 13a, palp, dorsal; 13b, palp, ventral.

FIG. 14: *D. tamborinensis*. External epigynum, cleared.

TABLE 3: LEG MEASUREMENTS OF *D. tamborinensis* ♀ AND (♂)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	0.92(1.10)	0.38(0.40)	0.82(1.02)	0.68(0.92)	0.30(0.38)	3.10(3.82)
ii	0.72(0.88)	0.36(0.38)	0.58(0.72)	0.56(0.66)	0.26(0.32)	2.48(2.96)
iii	0.54(0.72)	0.30(0.30)	0.32(0.46)	0.44(0.62)	0.24(0.28)	1.84(2.38)
iv	0.88(1.04)	0.34(0.34)	0.66(0.84)	0.76(0.94)	0.32(0.38)	2.96(3.54)
palp	0.38(0.46)	0.20(0.14)	0.24(0.24)	—	0.36(0.56)	1.18(1.40)

Notation of Spines: Palp: tibia, p.2.1-2; tarsus, numerous small spines. First leg: femur, d.2.p.1. distal; tibia, v.2.p.0.1.1.1.1.(1).r.0.1.1.1.1; metatarsus, v.1.p.0.(1).1.1.1.r.0.1.1.1; tarsus, 0. Second leg: femur, d.2.v.1. distal; tibia, v.(1).2.p.0.1.1.1.1. r.0.1.0.1.1. metatarsus, v.1.p.0.1.1.1.1.1. r.0.1.0.1.0.1. Third leg: femur, d.1; patella, d.1.(1); tibia, d.0.(1).0.v.0.(1).2.p.0.1.1.r.0.1.(1); metatarsus, numerous small spines. Fourth leg: patella, d.1; tibia, d.1.0.0.(1).0.v.1.0.1.0.2.p.0.1.0.1.0. r.0.1.0.1.0; metatarsus, several spines. No calamistrum.

This species is cribellate. The colulus was scanned and showed no spinning tubes. Anterior spinnerets are wider than the colulus. AS:colulus 1:0.70, unlike the other species described. The epigynal fossa is chitinised anteriorly (Figs. 14, 19b) and is about a third the width of the epigynum.

VARIATION: Cephalothorax length of ♀ QM W4895 is 1.30.

DESCRIPTION OF MALE

QM W4894: CL 1.34; CW 0.88; AL 1.24; AW 0.82.

Cephalothorax lengths varied from 1.16 to 1.40.

Colour and pattern are similar to ♀. 'Thoracic patches' absent. There are 5 teeth on retromargin of chelicerae.

Notation of spines: Prolateral distal spine on femur 1 is present as in ♀. This spine is also present in *D. silvaticus* but is absent in other ♂ *Dardurus* spp. examined. Apart from the presence of a dorsal spine on Femur IV the spination is like ♀.

Male palp: The embolus (Fig. 15b) arises anterior and prolateral to the apophysis in contrast to its position in the other species where it is

retrolateral. The apophysis here looks very like a 'median' apophysis. In view of the fact that *D. tamborinensis* is cribellate it is assumed that the position of the embolus is secondary.

Dardurus nemoralis n. sp.

(Figs. 16-18, 19d)

MATERIAL EXAMINED

HOLOTYPE: Wet sclerophyll forest, Cameron Falls track, Mt Tamborine, 50 km S. Brisbane, SE.Q., V. Davies, 22.vi.75, ♀, QM W4896.

PARATYPES: Cameron Falls track, Mt Tamborine, SE.Q., V. Davies, E. Howell, 22.vi.75, 2♀, 2♂, QM W4897.

DESCRIPTION OF FEMALE

CL 1.16; CW 0.74; AL 1.56; AW 1.00.

Cephalothorax and legs are a pale grey-brown. Small white 'thoracic patches' on each side of fovea are present. The abdomen is a dark grey-black with pale pattern posteriorly (Fig. 16). There are 4 teeth on retromargin of chelicera. The labium is wider than long 1:0.62. The sternum is longer than broad 1:0.89.

Notation of Spines: Palp: tibia, p.1.2; tarsus, numerous small spines. First leg: femur, d.1.p.1. distal; tibia, v.2.p.0.1.1.1.1.r.0.1.1.1.1; metatarsus, v.1.p.0.1.1.1.1.r.0.1.1.1; tarsus, 0. Second leg: femur, d.1.1.0; tibia, v.1.2.p.0.0.1.1.1.1.r.0.0.1.0.1.1; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1. Third leg: tibia, d.0.1.0.v.1.0.1.p.1.1.0.r.1.1.0; metatarsus with numerous small spines. Fourth leg: tibia, v.1.0.1.1.p.0.1.0.0.r.0.1.0.0; metatarsus with several spines. Calamistrum 7 hairs proximal. AS:cribellum 1:1.10.

The epigynum (Fig. 17a, b) is very similar to *D. spinipes* but has weak lateral ridges. It is to be noted that in mounting the epigynum for drawing the sac-

TABLE 4: LEG MEASUREMENTS OF *D. nemoralis* ♀ AND (♂)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	0.80(1.00)	0.36(0.44)	0.74(1.00)	0.62(0.84)	0.26(0.34)	2.78(3.62)
ii	0.70(0.78)	0.32(0.36)	0.50(0.64)	0.48(0.62)	0.24(0.28)	2.24(2.68)
iii	0.52(0.60)	0.28(0.30)	0.30(0.38)	0.38(0.54)	0.20(0.24)	1.68(2.06)
iv	0.78(0.90)	0.30(0.34)	0.54(0.74)	0.62(0.82)	0.26(0.32)	2.50(3.12)
palp	0.34(0.40)	0.18(0.18)	0.22(0.22)	—	0.30(0.58)	1.04(1.38)

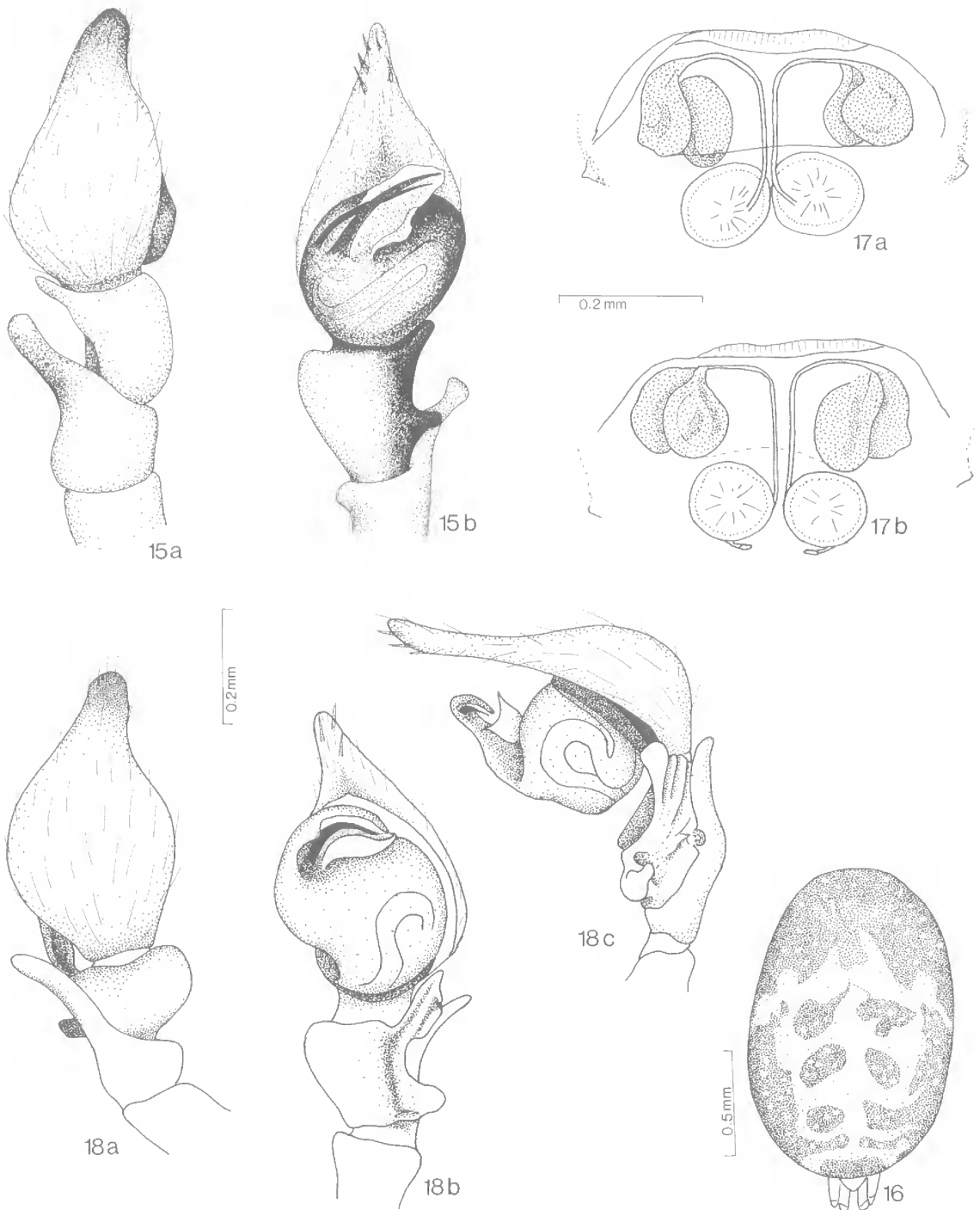


FIG. 15: ♂ *D. tamborinensis*. 15a, palp, dorsal; 15b, palp, ventral.

FIGS. 16-17: ♀ *D. nemoralis*. 16, abdomen, dorsal; 17a, external epigynum, cleared; 17b, internal epigynum.

FIG. 18: ♂ *D. nemoralis*. 18a, palp, dorsal; 18b, palp, ventral; 18c, palp, retrolateral.

like entrance ducts have been displaced (cf. Fig. 19d) so that the ducts to the spermathecae appear to rise anteriorly.

VARIATION: Cephalothorax lengths were 1.14–1.26.

DESCRIPTION OF MALE

QM W4897: CL 1.26; CW 0.88; AL 1.36; AW 0.88.

Cephalothorax length of the other ♂ 1.18.

Colour and pattern are similar to ♀.

Notation of spines in ♂ similar to ♀ except in following: First leg: femur, prolateral distal spine absent. Second leg: tibia, v.1.2.p.0.0.1.1.1.1.r.0.0.1.0.1.(1). Third leg: tibia, d.0.1.0.v.(1).0.1.p.1.1.0.r.1.0.0. Fourth leg: tibia, v.1.0.1.1–2.p.0.1.0.0.r.0.1.0.0.

Male palp: (Fig. 18a, b, c). The tibial apophysis lacks the median protuberances of *D. spinipes*. The embolus is retrolateral to the apophysis and rests on a membranous conductor.

***Dardurus saltuosus* n. sp.**
(Figs. 19c, 20)

MATERIAL EXAMINED

HOLOTYPE: Yabbra State Forest, Richmond Range, N. N.S.W., R. Raven, 28.ix.74, ♀, QM W4898.

PARATYPES: Yabbra State Forest, Richmond Range, N. N.S.W., R. Raven, 28.ix.74, 1♂, 1 juv., QM W4899.

DESCRIPTION OF FEMALE

CL 1.36; CW 0.90; AL 1.60; AW 1.00.

Cephalothorax and legs light brown, abdomen grey-black with lighter pattern. ‘Thoracic patches’ at each side of fovea. Four teeth on retromargin of chelicerae. Labium wider than long 1:0.60. Sternum longer than wide 1:0.86.

Notation of spines: Palp: tibia, p.1–2.2; tarsus, numerous spines. First leg: femur, d.1.1.0.p.1 distal; tibia, v.2.p.0.1.1.1.1.(1).r.0.1.1.1.1; metatarsus, v.1.p.0.1.1.1.r.0.1.1.1; tarsus, 0. Second leg: femur, d.1.1.0; tibia, v.2.p.0.1.1.1.1.r.0.1.0.1.1; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1; Third leg: tibia, d.0.v.1.0.1.p.0.1.1.r.0.0.1; metatarsus, numerous small spines. Fourth leg: femur, d.1.0.0; tibia,

v.1.1.1.1.p.0.1.0.(1).r.0.1.0.0; metatarsus, several spines. Calamistrum is well developed with 12 hairs. AS:cribellum 1:1.18.

The epigynum (Fig. 19e) has well developed lateral ridges and is twice as wide as long.

DESCRIPTION OF MALE

QM W4899: CL 1.36; CW 0.92; AL 1.33; AW 0.92.

Colour and pattern similar to ♀. ‘Thoracic patches’ absent.

Notation of spines: ♂ differs from ♀ in following spination. First leg: femur, d.1.0.0. Fourth leg: tibia, v.1.0.1.0.1.p.0.1.0.1.0.r.0.1.0.1.0.

Male palp: (Figs. 20a, b, c). The tibial apophysis has large anterior and posterior protuberances but no median ones. The embolus is retrolateral to the apophysis as in *D. spinipes*.

***Dardurus agrestis* n. sp.**
(Figs. 19f, 21)

MATERIAL EXAMINED

HOLOTYPE: Open grazed sclerophyll area, Black Duck Creek, near Junction View 90 km. W. Brisbane, SE.Q., V. Davies, 24.i.73, ♀, QM W4900.

PARATYPES: Black Duck Creek, SE.Q., V. Davies, 24.i.73, 1 penult. ♂, 2 juv., QM W4901.

DESCRIPTION OF FEMALE

CL 1.30; CW 0.88; AL 1.48; AW 1.00.

Cephalothorax and legs light brown, abdomen grey-black with lighter pattern. ‘Thoracic patches’ not visible. Four teeth on retromargin of chelicerae. Labium almost twice as wide as long 1:0.56. Sternum longer than wide 1:0.88.

Notation of spines: Palp: tibia, p.1.2; tarsus, numerous small spines. First leg: femur, p.1. distal; tibia, v.2.p.0.1.1.1.1.(1).r.0.1.1.1.1.(1); metatarsus, v.1.p.0.1.1.1.r.0.1.1.1.(1); tarsus, 0. Second leg: femur, d.1.0; tibia, v.2.p.0.1.1.1.1.r.0.1.0.1.0.1; metatarsus, d.1.1.0.0.p.1.1.1.1.r.0.1.1.1. Third leg: femur, d.1; tibia, d.0.1.0.v.1.0.1.p.1.1.0.r.0.1.1; metatarsus, numerous small spines. Fourth leg: tibia, d.0.p.0.0.0.1.0.r.0.0.0.1.0.v.1.1.1.0.2; metatarsus, several spines. Calamistrum absent. AS:cribellum 1:1.22.

TABLE 5: LEG MEASUREMENTS OF *D. saltuosus* ♀ AND (♂)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	0.96(1.12)	0.42(0.46)	0.88(1.06)	0.76(0.94)	0.30(0.34)	3.32(3.92)
ii	0.74(0.86)	0.36(0.40)	0.60(0.70)	0.56(0.68)	0.26(0.26)	2.52(2.90)
iii	0.62(0.68)	0.32(0.26)	0.36(0.42)	0.50(0.60)	0.22(0.24)	2.02(2.20)
iv	0.90(1.00)	0.38(0.38)	0.68(0.80)	0.76(0.96)	0.32(0.36)	3.04(3.50)
palp	0.38(0.40)	0.24(0.20)	0.30(0.42)	—	0.40(0.70)	1.32(1.72)

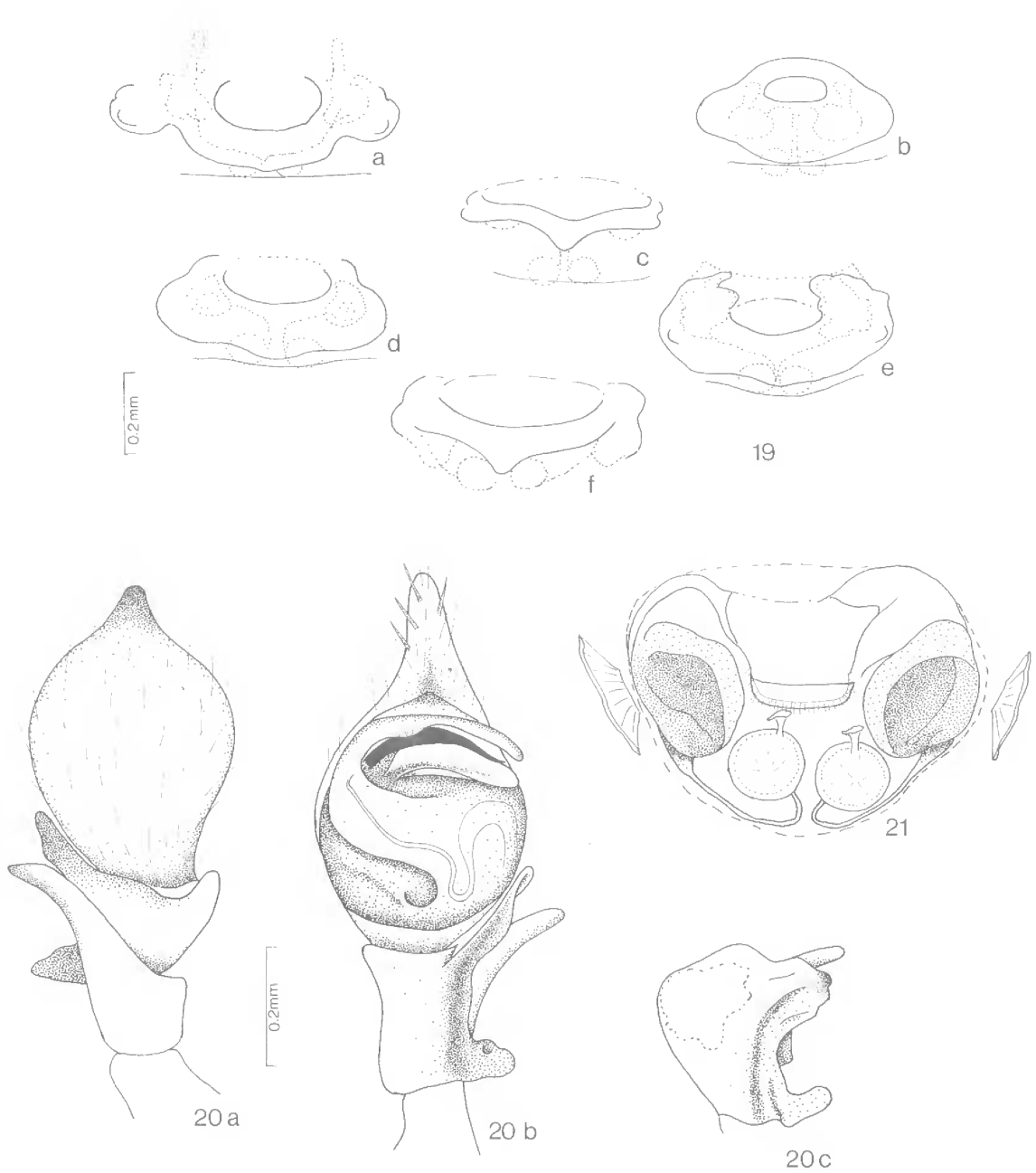


FIG. 19: External epigyna. 19a, *D. spinipes*; 19b, *D. tamborinensis*; 19c, *D. silvaticus*; 19d, *D. nemoralis*; 19e, *D. saltuosus*; 19f, *D. agrestis*.

FIG. 20: ♂ *D. saltuosus*. 20a, palp, dorsal; 20b, palp, ventral; 20c, tibia, with tarsal scar.

FIG. 21: ♀ *D. agrestis*. Internal epigynum.

TABLE 6: LEG MEASUREMENTS OF *D. agrestis* -

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
i	0.98	0.42	0.92	0.80	0.26	3.38
ii	0.80	0.36	0.64	0.64	0.24	2.68
iii	0.60	0.32	0.38	0.48	0.22	2.00
iv	0.90	0.34	0.72	0.78	0.32	3.06
palp	0.42	0.22	0.30	—	0.40	1.34

The epigynum (Fig. 19f, 21) has well marked lateral ridges.

VARIATION: A calamistrum of 7 hairs is present in the juveniles.

DESCRIPTION OF MALE

No adult ♂ has been collected. Measurements of a penultimate ♂ are: CL 1.20; CW 0.74; AL 1.42; AW 0.88.

KEY TO IDENTIFICATION OF *Dardurus* spp.

1. Four retromarginal teeth on chelicera; embolus retrolateral to apophysis; calamistrum usually present 2
 Five retromarginal teeth on chelicera; embolus prolateral to apophysis; no calamistrum *D. tamborinensis*
- 2(1) Fossa of epigynum almost as wide as epigynum 3
 Fossa of epigynum not exceeding ½ width of epigynum 4
- 3(2) Epigynum with marked lateral ridges *D. agrestis*
 Epigynum with weak lateral ridges *D. silvaticus*
- 4(2) Epigynum with marked lateral ridges 5
 Epigynum with weak lateral ridges *D. nemoralis*
- 5(4) External epigynum 2½ × wide as long: ♂ tibial apophysis with anterior, median and posterior protuberances *D. spinipes*
 External epigynum 2 × wide as long: ♂ tibial apophysis with anterior and posterior protuberances *D. saltuosus*

The decorated tubes of the different species are indistinguishable. The only similar tube seen is that of an undescribed sedentary clubionid which was found while looking for *Dardurus* in M.E. Queensland and NE. Queensland. It has a small flat silk disc with two openings and is found under logs in similar positions to *Dardurus*. At present the latter has a distribution limited to SE. Queensland and N. New South Wales.

Small pale 'thoracic patches' are present on the mature females of *D. spinipes*, *D. silvaticus*, *D. tamborinensis* (ecribellate), *D. nemoralis* and *D. saltuosus*. The palpal tarsus seems unusually large in all the species. These characters, for which no explanation is offered, may be useful in placing *Dardurus* in a higher taxon.

CRIBELLUM AND COLULUS

The cribellum of *Dardurus* spp. provides a further example of the reduction and eventual loss of this spinning organ in the amaurobiids. *D. spinipes*, *D. silvaticus* and *D. tamborinensis* were examined with the scanning electron microscope for the presence of spinning tubes on the cribellum. *D. silvaticus* was found to have many more tubes than *D. spinipes* and there was none on the colulus of *D. tamborinensis*. There is further correlation in the reduction of the calamistrum from 9 hairs in *D. silvaticus* to 7 thin hairs in *D. spinipes* to the absence of a calamistrum in *D. tamborinensis*. Unlike the cribella of the other species, the colulus width of *D. tamborinensis* is narrower than that of the anterior lateral spinneret but it is still flat and semi-circular. The unsegmented structure of the spinning tubes is in contrast to the segmented tubes of cribella of other spiders examined. These included *Ixeuticus longinquus* (= *I. martius*) (Plate 60C, D) *Stiphidion facetum* (Plate 60E, F) *Paramatachia decorata* and several undescribed cribellates all of which are known to spin webs. The scanning micrographs show interesting differences in density of the tubes in *I. longinquus* and *S. facetum* which may be useful in separating the two groups. The reduction in number of spinning tubes in *Dardurus* spp. and their unsegmented nature as well as the absence of any web outside the tube suggest that the spinning function of the cribellum is reduced or even lost. It is certainly lost in *D. tamborinensis*. If the absence of web outside the tube of the sedentary *Dardurus* is associated with a decrease in dependence on the snare for capturing food, then perhaps this is compensated for by the development of the very long spines on the anterior legs. They are common features of many hunting spiders and are used in the capture of food.

POSITION IN THE AMAUROBIIDAE

Dardurus does not fit easily into any of the recognised subfamilies though it has affinities with Forster and Wilton's (1973) Amphinectidae notably in relation to the large chitinised epigynum with lateral ridges, the undivided fossa, and the presence of 'thoracic patches'. The undivided cribellum, the presence of a patellal apophysis, and perhaps the habit suggest Lehtinen's (1967) *Matachiinae*.

There are so many amaurobiid spiders yet to be described from Australia that it seems preferable to leave the decision of placement in the family until more are described.

ACKNOWLEDGMENTS

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PLATE 59

A: *D. spinipes*. Camouflaged tube on under side of fallen log × 3·6.

B: *D. silvaticus*. Scanning electron micrograph of cribellum and anterior lateral spinnerets × 230.

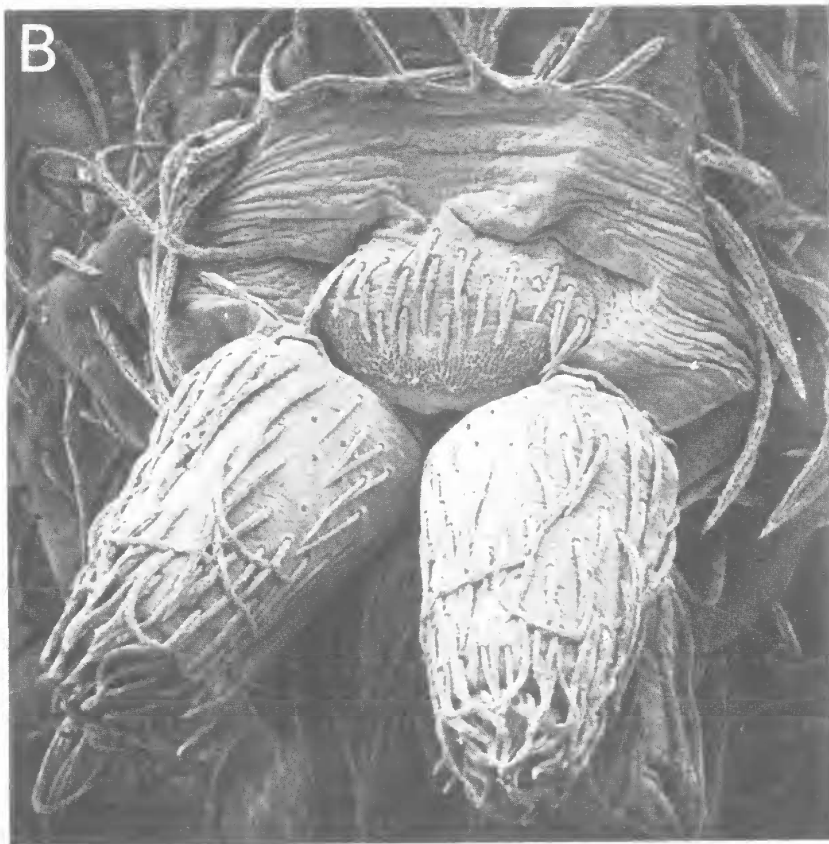
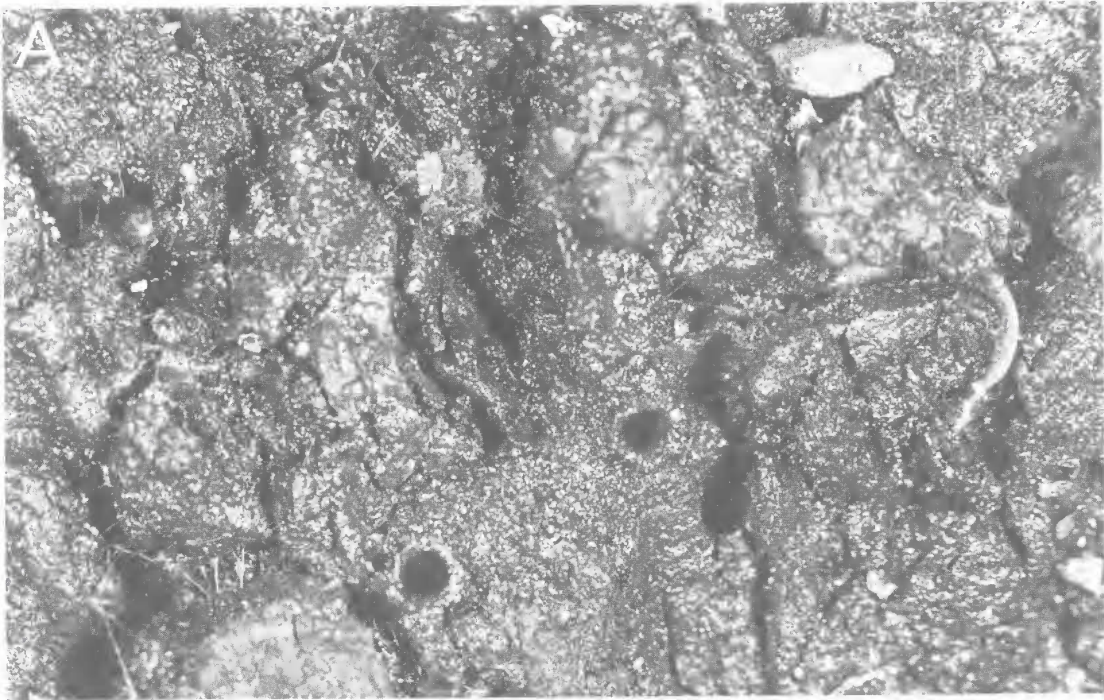


PLATE 60

Scanning electron micrographs A, ♀ *D. sylvaticus*, spinning tubes on cribellum \times 1450; B, ♀ *D. spinipes*, cribellum \times 1000, C, ♀ *Ixeuticus longinquus*, half of divided cribellum \times 450; D, *I. longinquus*, spinning tubes of cribellum \times 6600; E, ♀ *Stiphidion facetum*, cribellum \times 150; F, *S. facetum*, spinning tubes of cribellum \times 1800.

